DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 18 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 of U.S. Patent No. 7,188,033. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter presented in this application is substantively the same as those of U.S. Patent No. 7,188,033. It would have been obvious to omit using

a constraint that the bound electron(s) does not radiate under acceleration if its function were not desired. See MPEP 2144.04; Ex parte Wu, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989).

4. Please see the table listed below:

10/585,196	U. S. Patent No. 7,188,033
18. A system of computing and rendering the nature of bound atomic and atomic ionic electrons from physical solutions of the charge, mass, and current density functions of atoms and atomic ions, which solutions are derived from Maxwell's equations using a constraint that the bound electron(s) does not radiate under acceleration, comprising: a processor for processing and solving the equations for charge, mass, and current density functions of electron(s) in a selected atom or ion, wherein the equations are derived from Maxwell's equations using a constraint that the bound electron(s) does not radiate under acceleration; and a display in communication with the	1. A system of computing and rendering a nature of a chemical bond comprising physical, Maxwellian solutions of charge, mass, and current density functions of hydrogen-type molecules and molecular ions, said system comprising: processing means for processing Maxwellian equations representing charge, mass, and current density functions of hydrogen-type molecules and molecular ions, and; an output device in communication with the processing means for displaying the nature of the chemical bond comprising physical, Maxwellian solutions of charge, mass, and current density functions of hydrogen-type molecules and molecular

processor for displaying the current and charge density representation of the electron(s) of the selected atom or ion; wherein the physical, Maxwellian solutions of the charge, mass, and current density functions of atoms and atomic ions comprises a solution of the classical wave equation 5. $[\nabla^2 - 1/v^2 * \partial^2/a^2]\ p(r,\theta,\phi,t) = 0$	ions, wherein the physical, Maxwellian solutions of the charge, mass, and current density functions of hydrogen-type molecules and molecular ions comprises a solution of the classical wave equation 6. $[\nabla^2 - 1/v^2 * \partial^2/a^2]\ p(r,\theta,\phi,t) = 0$

7. Claim 55 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 94 of copending Application No. 11/596,218. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matter presented in this application is substantively the same as those of copending Application No. 11/596,218. It would have been obvious to omit using a constraint that the bound electron(s) does not radiate under acceleration if its function were not desired. See MPEP 2144.04; Ex parte Wu, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989).

8. Please see the table listed below:

10/585,196	11/596,128
9. 55. A method comprising the steps of; a.) inputting electron functions that are	94. A method, comprising: inputting the electron functions that obey Maxwell's

derived from Maxwell's equations using a constraint that the bound electron(s) does not radiate under acceleration; b.) inputting a trial electron configuration; c.) inputting the corresponding centrifugal, Coulombic, diamagnetic and paramagnetic forces, d.) forming the force balance equation comprising the centrifugal force equal to the sum of the Coulombic, diamagnetic and paramagnetic forces; e.) solving the force balance equation for the electron radii; f.) calculating the energy of the electrons using the radii and the corresponding electric and magnetic energies; g.) repeating Steps a-f for all possible electron configurations, and h.) outputting the lowest energy configuration and the corresponding electron radii for that configuration. However, Mills in combination with AAPR do not teach the output being rendered using electron function given by at least one of the group	equations; determining the corresponding centrifugal, Coulombic, diamagnetic and paramagnetic forces for a given set of quantum numbers corresponding to a solution of Maxwell's equations for at least one photon and one electron of the excited state; forming the force balance equation comprising the centrifugal force equal to the sum of the Coulombic, diamagnetic and paramagnetic forces; solving the force balance equation for the electron radii; calculating the energy of the electrons using the radii and the corresponding electric and magnetic energies, and outputting the calculated energy of the electrons, wherein the electron functions are given by at least one of the group comprising: 1. $\ell = 0$ 2. $p(r, \theta, \Phi, t) = e/8\pi r^2 [\delta (r - r_n)] [Y_0^0 (\theta, \Phi) + Y_\ell^m (\theta, \Phi)]$

comprising: 10. $\ell = 0$ 11. $p(r,\theta,\Phi,t) = e/8\pi r^2 [\delta(r - r_n)] [Y_0^0(\theta,\Phi) + Y_\ell^m(\theta,\Phi)]$ 12. $\ell \neq 0$ 13. $p(r,\theta,\Phi,t) = e/4\pi r^2 [\delta(r - r_n)] [Y_0^0(\theta,\Phi) + Re\{Y_\ell^m(\theta,\Phi) e^{iw_n t}\}]$ 14. *where $Y_\ell^m(\theta,\Phi)$ are the spherical harmonic function that spin about the z-axis with angular frequency ω_n with $Y_0^0(\theta,\Phi)$ the constant function,* 15. *Re $\{Y_\ell^m(\theta,\Phi) e^{iw_n t}\} = p_\ell^m(\cos\theta)$* cos (m Φ + $\omega_n t$) 16. *where to keep the form of the spherical harmononic as a traveling wave about the z-axis, $\omega_n' = m\omega_n$.*	3. $\ell \neq 0$ 4. $p(r, \theta, \Phi, t) = e/4\pi r^2 [\delta(r - r_n)] [Y_0^0(\theta, \Phi) + \text{Re}\{Y_\ell^m(\theta, \Phi) e^{iw_n t}\}]$ 5. where $Y(\theta, \Phi)$ are the spherical harmonic functions that spin about the z-axis with angular frequency ω_n with $Y_0^0(\theta, \Phi)$ the constant function, 6. Re $\{Y_\ell^m(\theta, \Phi) e^{iw_n t}\} = p_\ell^m(\cos\theta)$ cos $(m\Phi + \omega_n t)$ 7. where to keep the form of the spherical harmonic as a traveling wave about the z-axis, $\omega_n' = m\omega_n$.

Claim Objections

17. Claim 55-67 are objected to because of the following informalities:

18. In claim 55, line 22, “the constant function.” should read

19. - - the constant function, - -.

20. Appropriate correction is required.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAROL S. TSAI whose telephone number is (571)272-2224. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Ramos-Feliciano S. Eliseo can be reached on (571) 272-7925. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 26, 2010
Art Unit 2857

/Carol S Tsai/
Primary Examiner, Art Unit 2857